REMARKS / ARGUMENTS

For the convenience of the Examiner and clarity of purpose, Applicant has reprinted the substance of the Office Action in ***10-point bolded and italicized font.*** Applicant's arguments immediately follow in regular font.

> ***1. All outstanding objections and rejections are overcome by applicant's amendment filed 10/19/2006.***
>
> ***3. In light of applicant's arguments and upon updating the search, new grounds of rejection have been set forth below. The finality of the previous Office action has been withdrawn. Thus, the following action is non-final.***

Applicant thanks the Examiner for her reconsideration and withdrawal of the referenced objections and rejections, and for the withdrawal of the finality of the previous Office action.

Claim Objections

> ***4. Claims 4-8 and 20 are objected to because of the following reasons:***
>
> ***With respect to claims 4-6, the term "the alicyclic carboxylic acid anhydride" lacks full antecedent basis because claim 1 only provides for language "alicyclic acid anhydride."***
>
> ***With respect to claims 7 and 8, the term "the aromatic carboxylic acid anhydride" lacks full antecedent basis because claim 1 only provides for language "aromatic acid anhydride."***
>
> ***With respect to claim 20, at the end of the claim the language, "anhydride; anhydride" appears to be a typographical error.***
>
> ***Appropriate correction is required.***

Applicant thanks the Examiner for her observations. Claim 20 has been amended herein, and is now believed to be in condition for allowance. With regard to the Examiner's objections

to pending claims 4-6 and 7-8 for their use of the terms "the alicyclic acid anhydride" and "the aromatic acid anhydride", Applicant respectfully disagrees with the Examiner's suggestion that these claims lack proper antecedent basis. Applicant directs the Examiner's attention to pending independent claim 1, upon which the claims in question ultimately depend from. In particular, Applicant wishes to point out that the last portion of pending independent claim recites, in part, "wherein at least one of the two or more carboxylic acid anhydrides is **an** aromatic acid anhydride and at least one of the other carboxylic acid anhydrides is **an** alicyclic acid anhydride" (emphasis added). Consequently, as pending claim 1, upon which claims 4-6 and 7-8 depend, provides the limitation which is clearly referenced in the dependent claims in question, this rejection is believed to be in error.

Reconsideration and withdrawal of these objections is respectfully requested.

Claim Rejections—35 USC § 112

5. Claims 15-17 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 15, it is dependent on canceled claim 13.

With respect to claim 28, the term "the sand particles" lacks antecedent basis.

With respect to claims 16 and 17, the are rejected for being dependent on a rejected claim..

Claims 15 and 27 have been amended herein to address the informalities pointed out by the Examiner, and clarify the claims in question. Specifically, claim 15 has been amended to address the issues of antecedent basis pointed out by the Examiner. Claim 27 has been amended

herein in order to address the issue of antecedent basis concerning pending claim 28, dependent thereon, by including the term "particles" after the term "sand". Reconsideration of these rejections in light of the arguments presented herein is respectfully requested.

With regard to rejected claims 16 and 17, as claim 15 has been amended herein, and is now believed to have proper dependency, the rejections of claims 16 and 17 are now believed to be rendered moot. Reconsideration is respectfully requested.

Claim Rejections -35 USC § 103

6. Claims 18-24 and 27 are obvious over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster (US 3,341,555).

Egan discloses an acid-resistant flooring composition comprising an epoxy resin such as Araldite (page 1, line 49), sand filler, and granite chips (page 1, lines 29-32). The exemplified amount of epoxy to hardener is 5:3 (page 1, lines 54-55), wherein the ratio of filler to epoxy resin is 7:1 thus providing for an amount of hardener of 4.7 to 18.8 wt %/.

Egan is silent with respect to the addition of at least one carboxylic acid anhydride.

Nonken teaches that Araldite resins contain either a dibasic acid or polyamine hardener wherein the dibasic acid anhydride hardener includes hexahydrophthalic anhydride (col. 5, lines 21-27).

Given that Egan teaches the use of Araldite resins and its variations (page 1, line 49) and further given that Nonken teaches that Araldite resins contain a dibasic acid anhydride such as hexahydrophthalic anhydride, it would have been obvious to one of ordinary skill in the art to utilize an acid anhydride as the Araldite hardener of Egan, there being no expected or surprising results by using the acid anhydride over polyamine.

While the combined teachings of Egan and Nonken provide for an acid anhydride such as hexahydrophthalic anhydride, it fails to teach other acid anhydride hardeners for epoxy resins.

Wooster et al discloses a mixture of carboxylic acid anhydrides for use as a curing agent in epoxy resins comprisinghexahydrophthalic anhydride, tetrahydrophthalic anhydride, and phthalic anhydride (col. 7, lines 1-14), wherein this mixture provides for a stable homogeneous liquid composition at ambient temperatures (col. 2, lines 21-50) which is just as

> ***effective as other anhydrides (col. 3, lines 3-13). The addition of other cyclic anhydrides such as methyltetrahydrophthalic acid are also taught (col. 4, line 50).***
>
> ***Given that Egan and Nonken teach acid anhydride epoxy hardeners and further given the teachings by Wooster et al regarding the benefits had by using a mixture of aromatic and alicyclic acid anhydrides as hardeners, it would have been obvious to one of ordinary skill in the art to utilize a mixture of acid anhydrides as the hardener of Egan to obtain a more stable composition.***

Applicant respectfully traverses this rejection of claims 18-24 and 27. Independent claims 18 and 27 have been amended herein not in response to the Examiner's rejections, but in order to more accurately described the Applicants instant invention. More specifically, claims 18 and 27 have been amended to describe a curable resinous composition which comprises at least one heat activated catalyst. Without acceding to the Examiner's characterization of what the cited art teaches or suggests, Applicant contends that none of the cited art, alone or in combination, describe, suggests or teaches the curable resinous compositions described in the presently amended claims.

Additionally, because independent claim 18, upon which claims 19-24 depend, is believed to be distinguishable over Egan, Nonken and Wooster, *et al.*, it is believed that these claims are deemed allowable by depending upon an allowable independent claim. "If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

In summary, none of the cited reference suggests combining their teachings. Furthermore, the three cited references, alone or in combination, do not teach all of the claim limitations for pending claims 18-24 and 27 as amended herein. Accordingly, in view of the

arguments presented herein, Applicant requests that the rejections of claims 18-24 and 27 under 35 U.S.C. § 103(a) be withdrawn.

> ***7. Claims 34 - 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster et al (US 3,341,555) and further in view of Betts (US 3,924,880).***
>
> ***The discussion with respect to Egan, Nonken, and Wooster et al in paragraph 6 above is incorporated here by reference.***
>
> ***Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.***
>
> ***Betts teaches that laboratory counter tops are made of highly acid resistant materials such as epoxy resin (col. 1, lines 6-14). With respect to the heat-activated catalyst, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to use heat and a heat-activated to prevent premature curing or to accelerate curing.***
>
> ***Given that acid-resistant compositions like those taught by Egan are used in laboratory countertops as taught by Betts and further the teachings by Wooster et al regarding suitable cure activators, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop with the presently claimed cure activators.***

Applicant respectfully traverses the rejection of claims 34-36. Claims 33 and 35 have been cancelled with this response, and claim 36 has been amended herein. Without acceding to the Examiner's characterizations of any of the cited prior art references, Applicants believe that the claims as amended herein are patentable in view of the art referenced by the Examiner, and thus contend that the rejection of claims 34-36 is moot.

Applicant respectfully requests that the rejections of claims 34-36 under 35 U.S.C. § 103(a) be withdrawn.

> ***8. Claims 1-12, 15-17 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster et al (US 3,341,555) and further in view of Wypych***

> ***(Handbook of Fillers).***
>
> ***The discussion with respect to Egan, Nonken, and Wooster et al in paragraph 6 above is incorporated here by reference.***
>
> ***Egan discloses that granite chips have a particle size of 3-20 mm (page 1, lines 29-32), wherein the volume ratio of granite to sand ranges from 1.0:1.2 to 1.0:2.7 (page 1, lines 36-38). Note that granite and sand have approximately the same density (about 2.6 g/m^3) and therefore, even though the ratio of granite to sand is less than presently claimed, the ratio reads on the presently claimed ratio if separated out when a portion of the sand is in the larger particle portion.***
>
> ***Egan is silent with respect to the size or size distribution of the size particles and to the use of its composition in a countertop.***
>
> ***Wypych teaches that sand conventionally has a particle size of 2-90 microns (page 144).***
>
> ***Given that Egan teaches the use of sand and further that given that sand conventionally has a particle size of 2-90 microns, it would have been obvious to one of ordinary skill in the art to utilize conventional particles of sand, including those in the presently claimed.***

Applicant respectfully traverses the rejection of claims 1-12, 15-17, and 25-31 under 35 U.S.C. § 103(a) as alleged by the Examiner. Independent claims 1, 27 and 29 as amended with this communication are directed to curable resinous compositions comprising an epoxy resin and two or more carboxylic acid anhydrides, wherein at least one of the acid anhydrides is an aromatic acid anhydride and at least one of the other acid anhydrides is an alicyclic acid anhydride, and at least one heat activated catalyst. As indicated previously, Egan and Nonken are silent with regard to curable resinous compositions comprising more than a single carboxylic acid anhydride, let alone two or more acid anhydrides at least one of which is aromatic and the other of which is alicyclic, as recited within pending independent claims 1, 27 and 29. In fact, as discussed above and as admitted by the Examiner, Egan and Nonken suggest only the use of a single alicyclic acid anhydride in epoxy resins.

Wooster et al. (U.S. Patent No. 3,341,555) describes liquid dicarboxlic acid anhydride compositions which, among other things, comprise *essentially* cyclic anhydrides of polycarboxylic acids in the form of stable homogeneous liquids which are freeze-thaw resistant, and which when frozen will revert to their original homogenous liquid state upon warming to about 20-30 °C (column 2, lines 21-31; emphasis added), as well as processes for preparing such compositions. The compositions of Wooster are also described to contain a stabilizing agent which is specifically described to be "the reaction product of equimolar quantities of a tertiary amine and a polycarboxylic acid anhydride" as a tertiary amine-anhydride complex, which obviates the need for the use of accelerators, and which prevents having to preheat the anhydride to an elevated temperature in order to keep the curing mass in the liquid phase. In fact, Wooster et al. specifically suggests against any improvements or modifications to higher-temperature epoxy resin mixtures, and focuses on those compositions which can simultaneously handle low temperatures and then be handled at ambient temperature. Applicants pending independent claims 1, 27 and 29 as amended herein do not describe or contemplate the compositions and methods of blending described and claimed by Wooster et al. Additionally, there is no suggestion by Wooster to combine with or modify the teachings of Egan or Nonken, alone or in combination, so as to obtain the Applicants instant invention as currently described and claimed.

Wypych describes only the physical details of sand that can be used as a filler in a variety of materials and compositions. Wypych is silent to the use of sand fillers in resinous compositions, and makes no suggestions of the use of sands in combinations with epoxy resins. As such, because independent claims 1, 27 and 29 are directed to curable resinous compositions

which includes two or more carboxylic acid anhydrides, at least one of which is aromatic and at least one of the other of which is alicyclic, and Applicant has found no disclosure or teaching in Egan, Nonken, Wooster et al, or Wypych, alone or in combination, of a composition as recited by claims 1, 27 and 29 as amended herein, rendering this rejection moot. Reconsideration of this rejection in light of the current claim amendments, as well as the statements herein, is appreciated.

Pending claims 2-12, and 15-17 depend from independent claim 1. Claims 25-26 and 28 depend from independent claim 18, which has been previously distinguished over the cited references as well. Claims 30-31 depend from independent claim 29. Consequently, claims 2-12, 15-17, 25, 26, 28 and 30-31 are believed to be deemed allowable by depending from an allowable independent claim. *In re Fine*, supra.

Similarly, because independent claim 18, upon which claims 25 and 26 depend, have been distinguished above regarding at least Egan, Nonken, and Wooster et al, it is believed that these claims are also deemed allowable by depending on an allowable independent claim.

> ***9. Claims 32, 33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314), Wooster et al (US 3,341,555), and Wypych (Handbook of Fillers) and further in view of Betts (US 3,924,880).***
>
> ***The discussion with respect to Egan, Nonken, Wooster et al, and Wypych in paragraph 8 above is incorporated here by reference.***
>
> ***Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.***
>
> ***Wooster et al teaches suitable amines as cure activator (col. 4, line 60 to col. 5, line 6), which include polyamines and imidiazoles.***

> ***Betts teaches that laboratory counter tops are made of highly acid-resistant materials such as epoxy resin (col. 1, lines 6-14).***
>
> ***Given that acid-resistant compositions like those taught be Egan are used in laboratory countertops as taught by Betts, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop and to use suitable amines like presently claimed as a cure activator as taught by Wooster et al.***

Applicant respectfully traverses the rejection of claims 32, 33 and 36. Claim 33 has been cancelled herein, rendering its rejection moot. Egan, Nonken, Wooster et al., Wypsych and Betts have been described previously, and their combination as suggested by the Examiner is believed to be moot in view of the present amendments to the claims. Claims 32 and 36 refer back to pending independent claim 1, which has been distinguished above. Applicant contends that claims 32 and 36 are patentable over the cited references, as none of the cited art suggests the combination alleged by the Examiner to form the compositions of the Applicants instant invention. Additionally, as detailed above, none of the cited references, alone or in combination, recite all of the claim limitations of the resinous composition of claim 1, to which claim 32 refers.

In short, the currently rejected claims, and the claims upon which they refer and/or depend, have been distinguished above, and are believed to be allowable in light of the present amendments to the claims. Reconsideration of these rejections in light of these arguments is appreciated.

* * * * *

Conclusion

Of the 35 original pending claims in this application, claims 1, 15, 18, 20, 27, 29 and 36 have been amended herein. Claims 33 and 35 have been cancelled. New claim 37 has been added. With this response, claims 1-12 and 15-32, 34, and 36-37 are now pending in this application. Applicant respectfully submits that each claim is patentable, as detailed herein. A notice of allowance is respectfully requested.

Claims 1, 18, 27, and 29 have been amended herein to add the component of a heat-activated catalyst to the curable resinous composition claims. Claims 15, 20 and 36 have been amended to address antecedent basis or typographical issues, respectively. New claim 37 has been added to include the description of specific heat-activated catalysts that may be included in the instantly claimed compositions. Support for these claim amendments, and new claim 37, may be found in the original claims as filed, and in the specification as filed, for example at page 6, lines 23-25. Applicant contends that these amendments to the claims do not constitute the addition of new matter.

Applicant does not believe that any additional fees are due at this time. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to this document, the Commissioner is hereby authorized to deduct the requisite fees necessary to make this and related papers timely and effective from Locke Liddell & Sapp LLP Deposit Account No. 12-1322, referencing matter number 019377-00100.

Applicant thanks the Examiner for her consideration and effort on this matter and submits that this application is now in condition for allowance. Applicant respectfully requests that a

timely Notice of Allowance be issued in this case.

In order to expedite matters on this case, the Examiner is encouraged to contact the undersigned directly in order to advance this application toward allowance.

Respectfully submitted,

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